

ADDITIONAL MATERIAL TOWARD A MONOGRAPH OF THE GENUS CALLICARPA.

XVII

Harold N. Moldenke

CALLICARPA L.

Additional synonymy: Callicarpa Willd. ex Moon, Cat. Indig. & Exot. Fl. Ceyl. 1: 10. 1824.

Additional & emended bibliography: Jacq., Select. Stirp. Amer. Hist. 18: 1788; R. Br., Prodr. Fl. Nov. Holl., imp. 1, 511—512 (1810) and imp. 2, [Isis 1819:] 153—154. 1819; Sweet, Hort. Brit., ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 550. 1832; Sweet, Hort. Brit., ed. 3, 550. 1839; Schau. in A. DC., Prodr. 11: 627, 640—647, 649, 654, & 682. 1847; Wight, Icon. Fl. Ind. 4 (3): 15, pl. 1480. 1849; Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; Teijsm. & Binn., Natuurk. Tijdschr. Nederl. Ind. 25: 409—410. 1863; Engl., Syllab. Pflanzenfam., ed. 2, 178 (1898), ed. 3, 188 (1903), ed. 5, 192 (1907), and ed. 6, 198. 1909; J. C. & M. Willis, Rev. Cat. Flow. Pl. Ceyl. [Perad. Man. Bot. 2:] 69 & 153. 1911; Gilg in Engl., Syllab. Pflanzenfam., ed. 7, 314 (1912) and ed. 8, 319. 1919; Fedde & Schust. in Just, Bot. Jahresber. 44: 253 & 254. 1922; Gilg in Engl., Syllab. Pflanzenfam., ed. 9 & 10, 339. 1924; Fedde in Just, Bot. Jahresber. 45 (1): 501. 1923; Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 148. 1923; Fedde in Just, Bot. Jahresber. 44: 1383. 1927; Burkill, Dict. Econ. Prod. Malay Penins., imp. 1, 1: 403—405. 1935; Kirtikar & Basu, Indian Med. Pl., ed. 2, imp. 1, 3: 1921—1922. 1935; Diels in Engl., Syllab. Pflanzenfam., ed. 11, 339. 1936; M. F. Baker, Fla. Wild Fls., ed. 2, imp. 1, 189 & 236. 1938; Sastri, Wealth of India Raw Mat. 2 (R): 14. 1950; Razi, Journ. Univ. Poona 1 (2): Biol. 47. 1952; Estores Anzaldo, Marañon, & Ancheta, Philip. Journ. Sci. 86: 236. 1958; Banerji, Rec. Bot. Surv. India 19 (2): 74. 1966; Barriga-Bonilla, Hernández-Camacho, Jaramillo-T., Jaramilla-Mejía, Mora-Osejo, Pinto-Escobar, & Ruiz-Carranza, Isla San Andrés 59. 1969; Rouleau, Guide Ind. Kew. 32. 1970; Anon., Agricult. Ind. 35: 174. 1971; Bojarczuk & Bojarczuk, Arbor. Kornick. 18: [237]. 1973; Williamson, Sunset West. Gard. Book, imp. 11, 207. 1973; Kirtikar & Basu, Indian Med. Pl., ed. 2, imp. 2, 3: 1921—1922. 1975; Kooiman, Act. Bot. Neerl. 24: 462. 1975; Kunkel, Excerpt. Bot. A. 26: 129. 1975; Stalter, Castanea 40: 13. 1975; Zimmerm. & Ziegler in Zimmerm. & Milburn, Transp. Pl. 1 [Pirson & Zimmerm., Encycl. Pl. Physiol., ser. 2, 1]: 502. 1975; Anon., Biol. Abstr. 61: ACl. 569. 1976; M. F. Baker, Fla. Wild Fls., ed. 2, imp. 2, 189 & 236. 1976; Follmann-Schrag, Excerpt. Bot. A. 26: 504. 1976; Gillis, Phytologia 35: 94 & 99. 1976; Grubb & Tanner, Journ. Arnold Arb. 57: 329. 1976; Hocking, Excerpt. Bot. A. 28: 259 & 260. 1976; Lakela, Long, Fleming, & Genelle, Pl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 115, 150, & 152. 1976; Long & Lakela, Fl. Trop.

Fla., ed. 2, 733, 736—737, & 944. 1976; Mohlenbrock, *Castanea* 41: 310 & 318. 1976; Moldenke, *Phytologia* 34: 153—166, 247—249, 252—255, 262, 264, 266, 267, 272, & 500. 1976; Nixon & Raines, *Tex. Journ. Sci.* 27: [443], 447, & 448. 1976; Rogerson & Becker, *Bull. Torrey Bot. Club* 103, 145, & 235. 1976; Saxena & Khotale, *Journ. Bomb. Nat. Hist. Soc.* 73: 28. 1976; Soukup, *Biota* 11: 3, 7—8, & 21. 1976; Walker & Guppy, *Austral. Journ. Ecol.* 1: 205. 1976; Anon., *Biol. Abstr.* 63: 6129. 1977; Lelong, *Sida* 7: 140. 1977; López-Palacios, *Fl. Venez. Verb.* 9—11, 14, 22, 24, 25, 215—220, 646, 647, 649, 652, & 653, fig. 49. 1977; Meher-Homji, *Feddes Repert.* 88: 119. 1977; [Moldenke], *Biol. Abstr.* 64: 6962. 1977; Moldenke, *Phytologia* 35: 507 (1977) and 36: 28, 30, 38, 39, 41, 502, & 510. 1977; Musselman, Nickrent, & Levy, *Rhodora* 79: 264. 1977; Ono, *Mem. Nat. Sci. Mus.* 10: 65. 1977; K. E. Rogers, *Sida* 7: 78. 1977; Rogerson, Becker, & Prince, *Bull. Torrey Bot. Club* 104: 82. 1977; Subramanian & Kalyani, *Indian Forest.* 103: 113 & 117. 1977; Troth & Nicolson, *Phytologia* 35: 225 & 227. 1977; Yoshida & Tamawa, *Notes Waimea Arbor.* 3 (2): 10. 1977; Genelle & Fleming, *Castanea* 43: 49. 1978; Moldenke, *Phytologia* 39: 424 & 506. 1978; A. L. Moldenke, *Phytologia* 40: 361. 1978; Weaver, *Arnoldia* 38: 100 & 101. 1978.

Walker & Guppy (1976) list Callicarpa as a constituent part of their so-called "floristic group 5112".

The Ebalo 1189, distributed as Callicarpa sp., actually is Geunisia pentandra (Roxb.) Merr.

#### CALLICARPA ACULEOLATA Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Hocking, *Excerpt. Bot. A.* 28: 260. 1976; Moldenke, *Phytologia* 33: 377—378. 1976.

#### CALLICARPA ACUMINATA H.B.K.

Additional synonymy: Callicarpa acuminata L. ex Moldenke, *Phytologia* 36: 41, in syn. 1977. Callicarpa acuminata H.B.K., in herb.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Barriga-Bonilla, Hernández-Camacho, Jaramillo-T., Jaramillo-Mejía, Mora-Osejo, Pinto-Escobar, & Ruiz-Carranza, *Isla San Andrés* 59. 1969; Soukup, *Biota* 11: 8. 1976; Moldenke, *Phytologia* 34: 154, 252, & 255 (1976) and 36: 41. 1977; López-Palacios, *Fl. Venez. Verb.* 216—220, 646, & 647, fig. 49. 1977; A. L. Moldenke, *Phytologia* 40: 361. 1978.

Additional illustrations: López-Palacios, *Fl. Venez. Verb.* [218], fig. 49. 1977.

Recent collectors describe this plant as a shrub or small tree, 3—6 m. tall, the trunk to 10 cm. in diameter at the base, the stems often growing as a clump from a sawed-off base, the fruit "wine-red to blackish", "becoming reddish-violet", or "various shades of purple", juicy, and have found it growing along roadsides, in forests on limestone outcrops, disturbed primary forests, and brushy-weedy pastures along streams, "on limestone in

quebradas with clay soil and mixed tropical vegetation", on slopes and steep ravines with Seasonal Evergreen Forest of Belotia, Talauma, Pinus, and Quercus", often also growing in close association with Heliconia, Croton, and Erythrina, at 900—1900 m. altitude, flowering in February, May, June, August, and November, fruiting in January and September. Some refer to it as "frequent", but others as "infrequent". They report the vernacular name, "uva".

The corollas are said to have been "white" on Contreras 11154, Croat 22219, 23445, & 23593, Duke 12515, Liesner 2081, Lundell & Lundell 16402, Martínez-Calderón 192, and Poole & Watson 1035, and "yellow" on Dwyer 12760.

López-Palacios (1977) cited from Venezuela only the following collections: Lara: Badillo 472. Trujillo: Steyermark 56771.

Material has been misidentified and distributed in some herbaria as C. roigii Britton. On the other hand, the Contreras 2213, previously cited by me as typical C. acuminata, actually represented the more recently described var. argutedentata Moldenke.

Additional citations: MEXICO: Chiapas: Breedlove 27942 (N); Ton 1396. Oaxaca: Martínez-Calderón 192 (N); J. V. Santos 2624 (Au—263544). San Luis Potosí: Dunn, Harmon, & Enright 17515 (Ws). Tamaulipas: Martínez-Ojeda 50 (N). Veracruz: J.V.Santos 2651 (Au—263545); Ventura A. 4624 (Au), 5393 (Au). GUATEMALA: El Petén: Contreras 3339 (Au—228051), 5856 (Ld), 5128 (Ld); C. L. Lundell 16402 (Au—228037). Izabal: Contreras 11154 (W—2795346). BELIZE: Croat 23445 (N), 23593 (N); Dwyer 12760 (N). HONDURAS: Comayagua: Molina R. 8470 (Ld), 13016 (Ld), 13023 (Ld). Copán: Poole & Watson 1035 (Ld, Ld). Lempira: Molina R. 12959 (Ld). Olancho: Molina R. 13238 (Ld). NICARAGUA: Bluefields: Proctor, Jones, & Facey 27272 (Ld). COSTA RICA: Puntarenas: Liesner 2081 (N). PANAMA: Chiriquí: Croat 22219 (N). Colón: M. Nee 6991 (N, W—2787291, W—2812519). PEARL ISLANDS: San José: Duke 12515 (W—2788350). COLOMBIA: Valle del Cauca: Cuatrecasas 22883 (W—2817327). PERU: San Martín: Belshaw 3148 (Ld); Woytkowski 8368 (W—2786475).

#### CALLICARPA ACUMINATA var. ARGUTEDENTATA Moldenke

Additional bibliography: Moldenke, *Phytologia* 33: 379—382 (1976) and 34: 252. 1976.

Recent collectors describe this plant as a tree, 4 m. tall, the trunk 2 inches in diameter, and have found it in flower in April. The corollas on Contreras 2213, a collection previously erroneously reported by me as typical C. acuminata (before the present variety was recognized), are said to have been "white".

Additional & emended citations: MEXICO: San Luis Potosí: R. McVaugh 10489 (Au—236043, Ld). GUATEMALA: El Petén: Contreras

2213 (Au--228055, Ld, S).

## CALLICARPA ACUMINATA var. PRINGLEI (Briq.) Moldenke

Additional bibliography: Moldenke, Phytologia 33: 379--382, 404, & 504. 1976; A. L. Moldenke, Phytologia 40: 361. 1978.

## CALLICARPA ACUTIDENS Schau.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; Moldenke, Phytologia 33: 382. 1976.

## CALLICARPA ALBIDO-TOMENTELLA Merr.

Additional bibliography: Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 148. 1923; Moldenke, Phytologia 33: 383. 1976.

## CALLICARPA AMERICANA L.

Additional & emended bibliography: Sweet, Hort. Brit., ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 550. 1832; Hook., Comp. Bot. Mag. 1: 176 & 349. 1836; Sweet, Hort. Brit., ed. 3, 550. 1839; Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; M. F. Baker, Fla. Wild Fls., ed. 2, imp. 1, 189. 1938; Kooiman, Act. Bot. Neerl. 24: 462. 1975; Stalter, Castanea 40: 13. 1975; M. F. Baker, Fla. Wild Fls., ed. 2, imp. 2, 189. 1976; Hocking, Excerpt. Bot. A.28: 260. 1976; Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 115, 150, & 152. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, 737 & 944. 1976; Mohlenbrock, Castanea 41: 310 & 318. 1976; Nixon & Raines, Tex. Journ. Sci. 27: [443], 447, & 448. 1976; Soukup, Biota 11: 7. 1976; Moldenke, Phytologia 33: 481 (1976), 34: 247--249 & 272 (1976), and 36: 28 & 30. 1977; Anon., Biol. Abstr. 63: 6129. 1977; Lelong, Sida 7: 140. 1977; López-Palacios, Fl. Venez. Verb. 215, 340, & 647. 1977; Musselman, Nickrent, & Levy, Rhodora 79: 264. 1977; K. E. Rogers, Sida 7: 78. 1977; Genelle & Fleming, Castanea 43: 49. 1978; A. L. Moldenke, Phytologia 40: 361. 1978.

According to Lakela and her associates (1976) this species inhabits "coastal strand, swamp forest, [and] pine flatwoods", flowering in the spring. Mohlenbrock (1976) asserts that it inhabits moist or dry hammocks in the Ocala National Forest, Florida, occurring there "under Magnolia grandiflora which is dominant in moist hammocks".

Both Sweet (1830) and Loudon (1832) assert that this species was in cultivation in British gardens in their time and was introduced from "Carolina" in 1724. They call it the "American callicarpa".

Recent collectors describe the species as a loose shrub, 2--3 m. tall, arching and sprawling, sometimes weakly upright, the stems brittle, to 4 cm. in diameter, and have found it "in open woods above backswamp, in much cracked dark-brown silty clay in dominant complex of Fraxinus-Gleditsia-Liquidambar-Pinus taeda" and "in association with Solidago, Desmodium, Lespedeza, Heterotheca, and Helianthus in dry, poor, sandy soil", fruiting in November. The

corollas are said to have been "pale-lavender" on Shacklette 7115, "light-lavender" on Montgomery & Blake 179, "lavender" on Blake & Montgomery 217, and "pink-purple" on Duncan 20155.

Lelong (1977) reports the species "common" in open woods and thickets in Mobile County, Alabama, and Rogers (1977) found it "common" on the upper slopes of ravines and in upland woods in Forrest and Perry Counties, Mississippi. Stalter (1975) lists it from the Isle of Palms, Charleston County, South Carolina. Blake & Montgomery refer to it as a 5-foot shrub in open marginal areas at the edge of granite outcrops in the Piedmont Province of Georgia. Some of the leaves on Tharp s.n. [May 28, 1971] measure 19 cm. long and 12 cm. wide!

Additional citations: NORTH CAROLINA: Bladen Co.: Biltmore Herb. 1720c [Herb. Kent Sci. Mus. 43964] (Mi). Greene Co.: Radford 36434 (Ld). Harnett Co.: Foust & Foust s.n. [June 29, 1938] (Au—120926); Radford & Stewart 630 (Au—120925). Hattaras Island: F. R. Fosberg 17839 (Mi). SOUTH CAROLINA: Cherokee Co.: Ahles 34395 (Au—179480). GEORGIA: Jeff Davis Co.: Shacklette 7115 (Mi). McIntosh Co.: D. S. Correll 5442 (Mi). Oglethorpe Co.: Blake & Montgomery 217 (N); Montgomery & Blake 179 (N). Rabun Co.: Wood & Boufford 1826 (N). Sapelo Island: Duncan 20155 (Au—167517, Mi). FLORIDA: Alachua Co.: D'Arcy 2202 (Ld). Broward Co.: Stimson 865 (Au—245287, Au—277805). Columbia Co.: West & Arnold s.n. [2 Oct. 1946] (Au—120915). Dade Co.: Correll, Correll, & Popenoe 47049 (Ld); Meebold 27611 (Mu); A. Schwartz s.n. [29 July 1951] (Mi). Leon Co.: N. C. Henderson 63-1074 (Au—222923). Putnam Co.: Moldenke & Moldenke 29819 (Ld). Seminole Co.: P. A. Schallert 64 (Mu, Mu). Key Largo: A. Schwartz s.n. [27 July 1951] (Mi); Stern, Bailey, Hayden, & Palmer 3417 (W—2825496). Sanibel Island: Brumbach 8678 (Mi, W—2773124). MISSISSIPPI: Hancock Co.: Demaree 29574 (Au—120931). Jackson Co.: Demaree 32091 (Au—120919, 32845 (Au—120922); Seymour & Earle 111 (Au—180337). Lauderdale Co.: Jones & Jones 15313 (Au—260976). Stone Co.: Demaree 32553 (Au—120920). ARKANSAS: Columbia Co.: Barclay & Thompson 1039 (Ld). Garland Co.: R. Runyon 1203 (Au—291329), 1461 (Au), 5651 (Au—290904). Independence Co.: Demaree 27183 (Au—120911), 27736 (Au—120909); Thomas & Bio Class 8916 (Lc). Perry Co.: Demaree 27055 (Au—120910). Stone Co.: Demaree 27864 (Au—120942). Union Co.: McArdle 406 (Lc). LOUISIANA: Lafayette Par.: Thieret 17976 (Au—242658, Ld). Ouachita Par.: Erwin 78 (Lc). Union Par.: Gaines s.n. [6-23-50] (Au—120913). OKLAHOMA: Latimer Co.: Fink 70 (Au—120916). Marshall Co.: Taylor & Taylor 16028 (Ld); Waterfall 12299 (Au—120923). McCurtain Co.: Nelson, Nelson, & Goodman 5402 (Au—120921). TEXAS: Anderson Co.: Marsh 139 (Au—120901). Aransas Co.: M. C. Johnston 53253.27 (Au—120902); K. Peterson 37 (Au—230341).

Austin Co.: W. M. Jones WMJ.133 (Mu); Tharp s.n. [May 28, 1961] (Au—191745). Bastrop Co.: Bunte 15 (Au—244209, Ld); Duval 17 (Au—291211). Bell Co.: York & York 54475 (Au—120877). Blanco Co.: E. J. Palmer 12862 (Au—120876). Bowie Co.: D. S. Correll 15251 (Ld). Brazoria Co.: Killip 40552 (Au—120870). Brazos Co.: H. B. Parks s.n. [6-5-47] (Au—120854). Caldwell Co.: J. A. Mears 678 (Au—255106). Chambers Co.: Traverse 823 (Au—168056, Ld, Mu). Dallas Co.: C. L. Lundell 13930 (Ld, Ld). Fayette Co.: Ripple 51-748 (Au—120907). Freestones Co.: Lundell & Lundell 12939 (Ld). Gonzales Co.: D. S. Correll 20462 (Ld). Grayson Co.: H. Gentry 51-408 (Au—120906). Hardin Co.: Lundell & Lundell 11537 (Ld). Harris Co.: J. A. Mears 708 (Au—255496). Hays Co.: J. C. Johnson 412 (Au—120859). Jackson Co.: Turner & Tharp 53-421 (Au—120879). Jasper Co.: D. S. Correll 28580 (Ld); Correll & Correll 12536 (Mi). Lamar Co.: Rochat 117 (Au—201801, Au). Lavaca Co.: Tharp, Rogers, & York 49201 (Au—120905). McLennan Co.: L. D. Smith 89 (Au—120855), 615 (Au—120856). Polk Co.: Tharp, Turner, & Johnston 54713 (Au—120878). Robertson Co.: Massey 226 (Ld). Rusk Co.: C. E. Porter 51-1900 (Au—120904). Travis Co.: Lynch s.n. [July 5, 1954] (Au—208099); J. L. White 4693 (Au—120892). Tyler Co.: Crockett 1258 (Ld); Tharp, Gimbrede, & Yang 51-1465 (Au—120860). Walker Co.: N. C. Henderson 63-1023 (Au—225882).

**CALLICARPA AMERICANA f. LACTEA** (F. J. Muller) Rehd.

Additional bibliography: Moldenke, *Phytologia* 33: 387--388 (1976) and 34: 272. 1976.

As seems currently to be the more accepted practice in the naming of flower- or fruit-color variants, the accepted name for this taxon is now relegated to form, rather than varietal, rank.

Additional citations: TEXAS: Hardin Co.: Cory 54928 (Ld). Jasper Co.: D. S. Correll 28581 (Au—226248, Ld).

**CALLICARPA AMPLA** Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Moldenke, *Phytologia* 33: 388. 1976.

**CALLICARPA ANGUSTA** Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Moldenke, *Phytologia* 33: 388. 1976.

**CALLICARPA ANGUSTIFOLIA** King & Gamble

Additional bibliography: Moldenke, *Phytologia* 33: 388--389 (1976) and 34: 266. 1976.

**CALLICARPA ARBOREA** Roxb.

Additional bibliography: Sweet, *Hort. Brit.*, ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Buek, *Gen. Spec. Syn. Candoll.* 3: 73.

1858; Krishna & Ramaswami, Indian Forest. Bull., ser. 2, 79: 13. 1932; Sastri, Wealth of India Raw Mat. 2 (R): 14. 1950; Banerji, Rec. Bot. Surv. India 19 (2): 74. 1966; Zimmerm. & Ziegler in [Pirson & Zimmerm., Encycl. Pl. Physiol., ser. 2, 1:] Zimmerm. & Milburn, Transp. Pl. 1: 502. 1975; Moldenke, Phytologia 34: 154 & 164 (1976) and 36: 39. 1977; Meher-Homji, Feddes Repert. 88: 119. 1977.

Both Sweet (1830) and Loudon (1832) list this species as being cultivated in British gardens in their time, introduced from Nepal in 1822. They call it the "tree callicarpa". Banerji (1966) describes it as a "Tree with a thick trunk. Leaves ovate to oblong, tomentose beneath. Flower pale-purple. Common [in Nepal]". He cites Banerji 459. Sastri (1950) records the vernacular name, "khoja", and says of the species: "A moderate-sized tree, with trunk often crooked, attaining a height of 10-15 feet and girth [of] 1 1/2 - 3 ft. It is distributed in the sub-Himalayan tract from Kumaon to Bengal, upper Gangetic plain, Rajmahal and Chota Negpur hills, Assam and northern Circars of the Deccan peninsula. The wood (wt., 35-38 lb./c.ft.; sp. gr., 0.59; cal. val., 5164 cals., 9296 B.t.u.) is moderately soft and liable to insect attack. It is used only as firewood and for the production of charcoal."

Recent collectors refer to the species as a small spreading tree, to 30 feet tall, the trunk to 8 inches in diameter at breast height, and the bark smooth and light-gray, and have found it growing in deciduous and Bombax-Trewia riverine forests, at 250-900 m. altitude, flowering in May, September, and December. The corollas are said to have been "blue" on F. Brown 1276 and "rose-purple" on Troth 721.

The Meebold 26638, distributed as C. arborea, actually is C. pedunculata R. Br., while Jenkins s.n. [Assam] is a mixture with something non-verbenaceous.

Additional citations: NEPAL: Troth 721 (W-2826484). INDIA: Assam: Jenkins s.n. [Assam] (Mu-949, Mu); Masters s.n. [Assam] (Mu-950); Prazer s.n. [Looshai Hills, 1890] (Mu-3734). Khasi States: Hooker & Thomson s.n. [Mont. Khasia, 0-4000 ped.] (Mu-947); Native collectors s.n. [Khasia hills] (Mu-948). BANGLADESH: Griffith 6037 (Mu-952). BURMA: Tenasserim: Falconer 505 (Mu-954); Helper 6037 (Mu-953). THAILAND: Charoenphol, Larsen, & Warncke 3497 (N); Hosseus 618 (Mu-4173); Shimizu, Koyama, & Hutch T.10427 (Ac). CULTIVATED: Hawaiian Islands: Haughts s.n. [F. Brown 1276] (Mu).

CALLICARPA ARBOREA var. PSILOCALYX (H. J. Lam) Moldenke

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; Moldenke, Phytologia 33: 391. 1976.

The Rothdauscher s.n. [Manilla, 1879], distributed as C. magna

Schau., actually is Premna odorata Blanco.

Additional citations: PHILIPPINE ISLANDS: Luzon: M. Ramos 395 (Mu--4175--cotype).

**CALLICARPA AUSTRALIS** Koidz.

Additional bibliography: Fedde & Schust. in Just, Bot. Jahresber. 44: 253. 1922; Moldenke, Phytologia 33: 392 (1976) and 36: 38. 1977.

**CALLICARPA BASILANENSIS** Merr.

Additional bibliography: Moldenke, Phytologia 33: 392. 1976.

Rbalo describes this species as a tree, 5 m. tall, the trunk 3 inches in diameter, and the corollas purple, and found it in flower in January. He reports the vernacular name, "tabog".

Additional citations: PHILIPPINE ISLANDS: Basilan: Ebalo 865 (Mi).

**CALLICARPA BICOLOR** A. L. Juss.

Additional & emended bibliography: Schau. in A. DC., Prodr. 11: 642--643. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; Moldenke, Phytologia 33: 392--393 & 398. 1976.

Additional citations: PHILIPPINE ISLANDS: Luzon: Rothdauscher s.n. [Manilla, 1879] (Mu--1653, Mu--1654). Mindanao: M. S. Clemens 271 (Mu--4095). Negros: E. D. Merrill 207 (Mu--4170, Z).

**CALLICARPA BODINIERI** Léveillé

Additional bibliography: Williamson, Sunset West. Gard. Book, imp. 11, 207. 1973; Kooiman, Act. Bot. Neerl. 24: 462. 1975; Moldenke, Phytologia 33: 393--395. 1976.

**CALLICARPA BODINIERI** var. **GIRALDII** (Hesse) Rehd.

Additional synonymy: Callicarpa bodinieri var. giraldii R. ex Kooiman, Act. Bot. Neerl. 24: 462. 1975.

Additional bibliography: Kooiman, Act. Bot. Neerl. 24: 462. 1975; Moldenke, Phytologia 33: 393--395. 1976.

The Hutchison collection cited below, grown from seed secured from Poland, was widely distributed in herbaria as C. japonica Thunb., but seems better placed as C. bodinieri var. giraldii.

Additional & emended citations: CULTIVATED: California: P. C. Hutchison s.n. [Herb. Univ. Calif. Bot. Gard. 38.533-S1] (Au--244420, Ba, Mi, Mu).

**CALLICARPA BREVIPES** (Benth.) Hance

Additional bibliography: Moldenke, Phytologia 33: 395--396. 1976.

Additional citations: CHINESE COASTAL ISLANDS: Hainan: Liang 62467 (Mu, Z).



**CALLICARPA BREVIPETIOLATA** Merr.

Additional bibliography: Moldenke, *Phytologia* 34: 154, 158, 262, 264, & 267. 1976.

**CALLICARPA CANDICANS** (Burm. f.) Hochr.

Emended synonymy: *Callicarpa adenanthera* R. Br., *Prodr. Fl. Nov. Holl.*, imp. 1. 512. 1810.

Additional & emended bibliography: R. Br., *Prodr. Fl. Nov.*, imp. 1, 512 (1810) and imp. 2 [Isis 1819:] 154, 1819; Sweet, *Hort. Brit.*, ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858: Quisumbing, *Philip. Journ. Sci.* 77: 172. 1947; Sastri, *Wealth of India Raw Mat.* 2 (R): 14. 1950; Moldenke, *Phytologia* 33: 381, 387, 396—399, 403, & 490. 1976.

Both Sweet (1830) and Loudon (1832) list this species as cultivated in British gardens, introduced from the East Indies in 1799. They call it the "hoary callicarpa".

Sastri (1950) records the vernacular name, "arusha", and says of the species: "a shrub about 4 ft. high, occurring in Chittagong and yielding a weak fibre. The leaves are used as a remedy for abdominal troubles, for poulticing wounds and boils, and as fish poison".

Additional & emended citations: MASCARENE ISLANDS: Mauritius: *Herb. Sieber* 16 (Mu—956, Z). CULTIVATED: France: *Herb. Kummer s.n.* [ex horto Paris 1834] (Mu—1429). Germany: *Herb. Kummer s.n.* [Hort. bot. Monac. 1826] (Mu—1430); *Herb. Schwaegrichen s.n.* [Hort. Lipsiensis] (Mu—1428).

**CALLICARPA CANDICANS** var. **SUMATRANA** (Miq.) Moldenke

Additional bibliography: Moldenke, *Phytologia* 33: 397—399. 1976.

The corollas are said to have been "pink" on Liang 66541 and "lavender" on Squires 791. Recent collectors describe the plant as a subshrub, 1 m. tall, or a bush, 6—8 feet tall, the flowers slightly odorous, and have encountered it in open waste places and open sandy forests.

Additional citations: CHINESE COASTAL ISLANDS: Hainan: Liang 66541 (Mu). INDOCHINA: Annam: Squires 791 (Mu).

**CALLICARPA CATHAYANA** Chang

Additional bibliography: Moldenke, *Phytologia* 33: 399. 1976  
Additional citations: CHINA: Anhwei: Chow 28 (Ac, Z).

**CALLICARPA CAUDATA** Maxim.

Additional bibliography: E. D. Merr. & Merritt, *Philip. Journ. Bot.* 5: 380, 381, & 554. 1910; Moldenke, *Phytologia* 33: 399 & 406. 1976.

Recent collectors describe this species as a shrub, 10 feet tall, the stems to 2 inches in diameter, the succulent fruit bright-purple in February, and have found it growing in forests at 7000—8000 feet altitude.

Additional citations: PHILIPPINE ISLANDS: Luzon: Stern & Rojo 2335 (Mi).

**CALLICARPA CAULIFLORA** Merr.

Additional bibliography: Moldenke, *Phytologia* 33: 399. 1976.

Ebalo describes this plant as a shrub, 3 m. tall, the stems 4 inches in diameter, the corollas violet, found it in flower in December, and records the vernacular name, "limayap".

Additional citations: PHILIPPINE ISLANDS: Mindanao: Ebalo 792 (Mi).

**CALLICARPA DICHOTOMA** (Lour.) K. Koch

Additional bibliography: Sweet, *Hort. Brit.*, ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Bojarczuk & Bojarczuk, *Arbor. Kornick.* 18: [237]. 1973; Williamson, *Sunset West. Gard. Book*, imp. 11, 207. 1973; Kooiman, *Act. Bot. Neerl.* 24: 462. 1975; Moldenke, *Phytologia* 34: 154-155 & 266 (1976) and 36: 39. 1977.

Both Sweet (1830) and Loudon (1832) list this species as cultivated in British gardens at their time, introduced from China in 1822. They call it the "purple-flowered callicarpa". Walker (1976) calls it the "small callicarpa", a translation of the Japanese name, "ko-murasaki". He cites Fosberg 38552 from Ikema Island, Miyako.

Additional citations: CULTIVATED: North Carolina: Biltmore Herb. 4189 [August 2nd, 1897; *Herb. Kent Sci. Mus.* 43965] (Mi), 4189 [September 20th, 1897; *Herb. Kent Sci. Mus.* 43965] (Mi). MOUNTED CLIPPINGS: E. H. Walker, *Fl. Okin. & South. Ryuk.* 888-889. 1976 (W).

**CALLICARPA DOLICHOPHYLLA** Merr.

Additional bibliography: Moldenke, *Phytologia* 33: 402. 1976.

Additional citations: PHILIPPINE ISLANDS: Luzon: Cuming 1330 —isotype, Z—isotype).

**CALLICARPA ELEGANS** Hayek

Additional bibliography: Moldenke, *Phytologia* 33, 402. 1976.

Additional citations: PHILIPPINE ISLANDS: Luzon: Loher 4446 (Mu-3926), 12965 (Mu-4337).

**CALLICARPA ERIOCLONA** Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Moldenke, *Phytologia* 33: 397, 398, & 402-404 (1976) and 34: 266 & 267. 1976.

Recent collectors have encountered this species in evergreen forests near sealevel, fruiting in August.

Additional citations: THAILAND: Murata, Fukuoka, & Phengklai T.17417 (Ac). PHILIPPINE ISLANDS: Luzon: Cuming 911 (Mu-1432—isotype); Elmer 15124 (Mi); Loher 6681 (Mu-4171), 7287 (Mu-4172); Stearn 2172 (Mi). Mindanao: Wenzel 3389 (Mu); Zwickey 14

(Mi).

*CALLICARPA ERIOCLONA* var. *PAUCINERVA* (Merr.) Moldenke

Additional bibliography: Moldenke, *Phytologia* 33: 397, 398, & 403-404 (1976) and 34: 266 & 267. 1976.

Additional citations: MARIANA ISLANDS: Guam: E. H. Bryan Jr. 1218 (Mu).

*CALLICARPA FERRUGINEA* Sw.

Additional bibliography: Sweet, *Hort. Brit.*, ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Grubb & Tanner, *Journ. Arnold Arb.* 57: 329. 1976; Moldenke, *Phytologia* 33: 382 & 404. 1976.

Both Sweet (1830) and Loudon (1832) list this species as cultivated in British gardens in their time, introduced from Jamaica in 1794. They call it the "rusty callicarpa".

*CALLICARPA FORMOSANA* Rolfe

Additional bibliography: Estores Anzaldo, Marañon, & Ancheta, *Philipp. Journ. Sci.* 86: 236. 1958; Moldenke, *Phytologia* 34: 154 & 155. 1976.

The Huang & Kao collection, cited below, was found growing on a stream bank and is quite poor and unrepresentative of the species. It was distributed as *C. japonica* var. *kotoensis* (Hay.) Masam.

Recent collectors describe *C. formosana* as a shrub, 3 m. tall, found it in flower in June, and record the vernacular name, "apoyó". The corollas on Fox 36 are said to have been "whitish-green".

Walker (1976) calls this the "fairyland callicarpa", a translation of the Japanese "hōrai-murasaki", and cites Kanashiro 11 from Okinawa.

Additional citations: CHINA: Kwangtung: Ting & Shih 931 (Ac). FORMOSA: Huang & Kao 5176 (Ac); Tanaka & Shimada 10988 (Mu). PHILIPPINE ISLANDS: Luzon: Elmer 17611 (Mi); Fox 36 [*Philipp. Nat. Herb.* 4725] (Mi).

*CALLICARPA FORMOSANA* f. *ANGUSTATA* Moldenke

Additional bibliography: Moldenke, *Phytologia* 33: 405. 1976.

Material of this taxon has been misidentified and distributed in some herbaria as *C. blancoi* Rolfe, while the Elmer 22211, cited below, was previously (1967) mistakenly cited by me as typical *C. formosana*.

Additional citations: PHILIPPINE ISLANDS: Luzon: Elmer 22211 (Bz-17293, Ca-7817, Mi, N).

*CALLICARPA FURFURACEA* Ridl.

Additional bibliography: *Hocking, Excerpt. Bot. A.* 28: 260. 1976;

Moldenke, *Phytologia* 33: 406. 1976.

CALLICARPA GLABRA Koidz.

Additional bibliography: Anon., *Biol. Abstr.* 61: AC1.569. 1976; Moldenke, *Phytologia* 33: 481. 1976; Ono, *Mem. Nat. Sci. Mus.* 10: 65 & 70. 1977.

Ono (1977) lists this species from Chichijima in the Bonin Islands.

CALLICARPA INAEQUALIS Teijsm. & Binn.

Additional bibliography: Moldenke, *Phytologia* 33: 482. 1976.

Recent collectors have encountered this species along roadsides at the edge of forests, flowering in September.

Additional citations: GREATER SUNDA ISLANDS: Sumatra: Murara, Dransfield, & Saerudin S.1726 (Ac).

CALLICARPA INTEGERRIMA Champ.

Additional bibliography: Moldenke, *Phytologia* 33: 482 (1976) and 34: 162 & 164. 1976.

Additional citations: CHINA: Kwangtung: Tsang 21650 (Mu, Z).

CALLICARPA INVOLUCRATA Merr.

Additional bibliography: Moldenke, *Phytologia* 33: 482--482 (1976) and 34: 267. 1976.

Chai describes this species as a small tree, 20 feet tall, 5 inches in girth, with cauliferous inflorescence, the flower-buds greenish-white, the petals white, and the anthers yellowish. He found it growing in eroded soil on a slope near a stream, at 2100 feet altitude.

Additional citations: GREATER SUNDA ISLANDS: Sabah: Clemens & Clemens 27520 (Mu). Sarawak: Chai S.34032 (W--2801361).

CALLICARPA JAPONICA Thunb.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Kooiman, *Act. Bot. Neerl.* 24: 462. 1975; Bojarczuk & Bojarczuk, *Arbor. Kornick.* 18: [237]. 1973; Moldenke, *Phytologia* 34: 154, 155, & 272. 1976; López-Palacios, *Fl. Venez. Verb.* 126 & 647. 1977; Moldenke, *Phytologia* 40: 431. 1978.

Walker (1976) calls this the "Japanese beauty berry", a translation of the Japanese name, "murasaki-shikubu", and cites from *Herb. Univ. Taihoku* 3290 and Masamune & Nakamura s.n.; from Ishigaki: Hatusima 24014 and Masamune & Suzuki s.n.; from Miyako: F. R. Fosberg 38161, 38180, 38312, 38315, 38318, 38407, & 38546 at Okuhara & Sunagawa 92 & 110; and from Okinawa: Field & Lowe 21w at Nakamine 215.

The P. C. Hutchison s.n. [*Herb. Univ. Calif. Bot. Gard.* 38.533-S1], distributed as C. japonica and so cited by me in a previous publication, seems better placed as C. bodinieri var. giraldii (Hesse) Rehd.

Additional citations: JAPAN: Honshu: Gillis 4642 (Ld); Murata 19185 (Mu). Kiushu: Oldham 621 (Mu—963). Island undetermined: Bürger s.n. [Japonia] (Ac). MOUNTED CLIPPINGS: E. H. Walker, Fl. Okin. & South. Ryuk. 889. 1976 (W).

*CALLICARPA JAPONICA* f. *ALBIBACCA* Hara

Additional bibliography: Moldenke, *Phytologia* 33: 485 (1976) and 34: 272. 1976.

*CALLICARPA JAPONICA* var. *ANGUSTATA* Rehd.

Additional bibliography: Moldenke, *Phytologia* 33: 486 & 492. 1976.

Additional citations: CULTIVATED: Germany: Herb. Hort. Bot. Monac. s.n. [X.1935] (Mu).

*CALLICARPA JAPONICA* var. *LUXURIANS* Rehd.

Additional bibliography: Moldenke, *Phytologia* 34: 155. 1976.

Walker (1976) calls this the "large *Callicarpa japonica*" and the "Japanese beauty berry", listing also the Japanese names, "o-murasaki-shikibu", "mimingô", and "mindama-gwô". He cites from Iriomote: Fosberg 37763, SIRI 6507, and Yamazaki s.n.; from Ishigaki: Fosberg 37006, 37857, & 38067 and Masamune & Suzuki s.n.; from Miyako: Fosberg 38298; from Okinawa: Amano 6034, 6360, & 6941, Conover 1019 & 1035, Elliott & Nakamine 658, Kimura & Jurusawa 61, Moran 5076, E. H. Walker 8452, and Wilson 8109; and from Yonaguni: Hatusima 24532.

The Huang & Kao 5176, distributed as *C. japonica* var. *kotoensis*, seems to be *C. formosana* Rolfe instead.

Additional citations: JAPAN: Enoshima: Sawada s.n. [12 June 1927] (Mu). Hokkaido: Maximowicz s.n. [Hakodate, 1861] (Mu—1649, Mu—1650). Kiushu: Nakanishi s.n. [Aug. 9, 1954] (Mu). Island undetermined: Siebold s.n. (Mu—960, Mu—962). RYUKYU ISLAND ARCHIPELAGO: Satsunan Islands: Yakushima: Tagawa & Konta 75 (Mu). MOUNTED CLIPPINGS: E. H. Walker, Fl. Okin. & South. Ryuk. 889. 1976 (W).

*CALLICARPA JAPONICA* var. *RHOMBIFOLIA* H. J. Lam

Additional bibliography: Moldenke, *Phytologia* 33: 488. 1976.

Additional citations: CHINA: Shantung: Zimmermann 210 (Mu—3924).

*CALLICARPA KINABALUENSIS* Bakh. & Heine

Additional bibliography: Moldenke, *Phytologia* 33: 488. 1976.

Additional citations: GREATER SUNDA ISLANDS: Sabah: Clemens & Clemens 31348 (Mu—isotype).

*CALLICARPA KOCHIANA* Mak.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 73. 1858; Moldenke, *Phytologia* 33: 488—489 (1976), 34: 164 & 264 (1976), and 39: 424. 1978.

[to be continued]